TI-NSpire CX Calculator Quick Tips

Type of Problem	Calculator Keys	Notes	Example
Factoring or finding zeroes, solutions, x-intercepts, roots (factoring, quadratic equation, etc.)	**Menu – 3 – 3 – 1**	Gives you the "ROOTS" (zeroes/x-intercepts), so ***opposite*** factors Ex. If you get an answer of 2, the factor is (x – 2). If you get an answer of -1/2, the factor is (2x + 1).	1. $x^2 + x - 6$ 2. $6x^2 - 5x - 4$
System of Equations LINEAR (substitution, elimination)	**Menu – 3 – 2**	Use the "=" button; Only works for LINEAR systems	1. $\begin{cases} -4x - 2y = -12 \\ 4x + 8y = -24 \end{cases}$ 2. $\begin{cases} y = 7x - 19 \\ -2x + 3y = -19 \end{cases}$
System of Equations (graphing)	Graph both (use tab to graph more than one graph) **Menu – 6 – 4 (intersect)** Scroll to left of point ENTER. Scroll to right of point ENTER. Point (x, y) pops up!	Graphs must be in y = form in order to graph	1. $\begin{cases} y = x - 11 \\ y = -2x + 19 \end{cases}$
Graphing zeroes, y-intercepts, min, max (vertex)	Graph equation Menu – 5 – 1 **Graph trace** Arrow keys until the *word* (min, max, y-intercept, zero, etc.) comes up		1. $y = -x^4 + x^3 + 2x^2$ Zeros:_____ y-intercept:_____ Maximum:_____ Minimum:_____ 2. $f(x) = x^3 + x^2 - x - 2$ Zeros:_____ y-intercept:_____ Maximum:_____ Minimum:_____

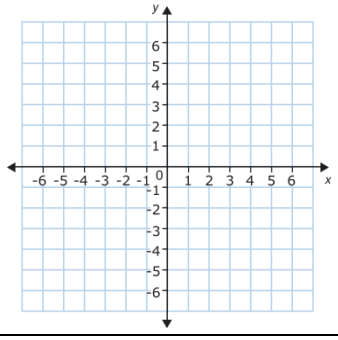
<table>
<tr>
<td>Regression</td>
<td>New Document
Menu
4: Add Lists
In “A” box, title it “x” and then list your x data values below.
In “B” box, title it “y” and then list your y data values below.

CTRL-doc for a new page

5: Add Data
“Click to add variable” on bottom put “x” and on the left put “y”

Menu – 4 – 6 –

*Choose linear or quadratic based on the question</td>
<td>Decide if linear or quadratic by looking at the graph or see what question asks!</td>
<td>1. Find the linear equation that best represents the data below:
<table><tr><td>Age (x)</td><td>Weight (y)</td></tr><tr><td>0</td><td>7.2</td></tr><tr><td>3</td><td>12.2</td></tr><tr><td>6</td><td>15.1</td></tr><tr><td>9</td><td>19.4</td></tr><tr><td>12</td><td>21.5</td></tr><tr><td>15</td><td>26.3</td></tr></table>
Equation:_____</td>
</tr>
<tr>
<td>Graph inequalities</td>
<td>On the graph page, delete the = sign by pressing the DELETE button, then choose
< > ≤ ≥</td>
<td>Must be in y = form first (you might need to solve)

*Don’t forget to switch inequality when mult. or div. by negative number!!</td>
<td>Sketch the graph below:
1. y < 2x+3
  </td>
</tr>
<tr>
<td>Standard deviation</td>
<td>4: Add Lists
Fill in x-values
Menu – 4 – 1 – 1</td>
<td>One-variable statistics
$\bar{x}$ = mean
σ = standard deviation
MED = median
σ^2= variance</td>
<td>1. 1. 20, 30, 35, 24, 36, 47, 48
Mean:_____
Median:_____
Mode: _____
Range:_____
Standard Deviation:_____
Variance:_____</td>
</tr>
</table>

ALGEBRA 2 ONLY Normal Distribution probabilities	**Menu – 5 – 5 – 2** Lower limit Upper limit μ = mean σ = standard deviation	Probability, distribution, normal Cdf Lower limit – smaller number, left side Upper limit – bigger number, right side	1. X is a normally distributed variable with μ=30 and σ=4. Find: a. P(x<35.2) b. P(30< x <35) c. P(x> 36)
ALGEBRA 2 ONLY Permutations	Menu – 5 – 2 n , r	Use comma button bottom left	1. A team of 8 basketball players needs to choose a captain and co-captain. How many ways can they choose?
ALGEBRA 2 ONLY Combinations	Menu – 5 – 3 n , r	Use comma button bottom left	A team of 17 baseball players needs to choose three players to refill the water cooler. How many ways can they choose three players?

Other helpful calculator keys to know!

Type of Problem	**Calculator Keys**	**Notes**
Fraction	CTRL ÷	
Nth root $\sqrt[n]{x}$	CTRL ^	
i	Pi button on bottom left	
Absolute value |x|	Button to the right of 9, 2nd row, first button | |	
Convert to decimal	Menu – 2 – 1 (Number, convert)	OR: Put a decimal point after the fraction: ex. 2/3. ENTER
New page	CTRL – DOC	
Graph table of points	CTRL T	Scroll up/down for more
Graph more than one graph	Tab	
Skip between graphs (if more than one on the page)	Up/down arrow	